AMENDMENTS TO THE CLAIMS

Claims 1-11. Canceled.

12. (New) A method of determining a concavity or a convexity of line and space patterns of a sample, the line and space patterns being arranged alternately on the sample, the method comprising the steps of:

scanning the line and space patterns on the sample with a charged particle beam;

forming a profile waveform based on charged particles emitted from the scanned portion of the sample;

forming a derivative waveform of said profile waveform;

comparing a first distance between zero (flat line) and a positive peak of said derivative waveform generated on one of the right and left sides of each peak position of said profile waveform with a second distance between zero (flat line) and a negative peak of said derivative waveform generated on the other of the right and left sides of each peak position of said profile waveform; and

determining, referring to a region between adjacent peak positions of said profile waveform, a region of the sample corresponding to a region of the derivative waveform having a pair of longer distances of the compared first and second distances of said derivative waveform to be the line pattern, and determining a region of the sample corresponding to a region of the derivative waveform having a pair of shorter distances of the compared first and second distances of said derivative waveform to be the space pattern.

13. (New) The method of determining a concavity or a convexity of line and space patterns of a sample according to claim 12, wherein widths of the line pattern and the space pattern are substantially equal.

14. (New) A method of determining a concavity or a convexity of line and space patterns of a sample, the line and space patterns being arranged alternately on the sample, the method comprising the steps of:

scanning the line and space patterns on the sample with a charged particle beam;

forming a profile waveform based on charged particles emitted from the scanned portion of the sample;

forming a derivative waveform of said profile waveform;

comparing the magnitudes of evaluation values obtained from a positive peak and a negative peak of said derivative waveform, said positive peak and negative peak being generated on the right and left sides of each peak of said profile waveform; and

determining, referring to a region between adjacent peak positions of said profile waveform, a region of the sample corresponding to a region of the derivative waveform having a pair of larger evaluation values of the compared evaluation values to be the line pattern, and determining a region of the sample corresponding to a region of the derivative waveform having a pair of smaller evaluation values of the compared evaluation values to be the space pattern.

15. (New) The method of determining a concavity or a convexity of line and space patterns of a sample according to claim 14, wherein each evaluation value corresponds to a distance (interval) between zero (flat line) and each of the pair of positive and negative peaks of said derivative waveform, the pair of positive and negative peaks being generated corresponding to the right and left feet of each peak position of said profile waveform.

16. (New) The method of determining a concavity or a convexity of line and space patterns of a sample according to claim 14, wherein widths of the line pattern and the space pattern are substantially equal.

3

17. (New) A measurement method comprising the steps of:

determining a target location for measurement of said sample based on the positions of said line and/or space patterns determined by the method of determining a concavity of a convexity of line and space patterns of a sample according to claim 12; and

measuring said sample.

18. (New) A measurement method comprising the steps of:

determining a target location for measurement of said sample based on the positions of said line and/or space patterns determined by the method of determining a concavity of a convexity of line and space patterns of a sample according to claim 14; and

measuring said sample.

4